

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

an image forming section for forming a pattern chart having a plurality of gradation patterns aligned thereon so as to suppress an uneven concentration appearing depending upon a scale of an electrostatic potential difference on the gradation patterns which are adjacent to each other in a sub-scanning direction of image formation,

an image reading section for reading image information from said pattern chart, and

an image processing section for adjusting an image forming condition based on the image information.

2. The image forming apparatus as defined in claim 1, wherein said image forming section forms said pattern chart such that a plurality of the gradation patterns have concentrations arranged in a staggered configuration.

3. The image forming apparatus as defined in claim 1, wherein said image forming section forms said pattern chart such that the gradation patterns adjacent to each other in the sub-scanning direction are brought into contact with each other.

4. The image forming apparatus as defined in claim 1,

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wherein said image forming section forms a dummy pattern which is adjacent to the gradation pattern at an end in the sub-scanning direction on said pattern chart and which is equal or close to the end gradation pattern in concentration.

5. The image forming apparatus as defined in claim 1, wherein a main scanning direction of image formation is perpendicular to the sub-scanning direction, and said image forming section forms said pattern chart such that a plurality of said gradation patterns with closest concentrations are aligned in the main scanning direction.

6. The image forming apparatus as defined in claim 5, wherein said image forming section forms said pattern chart such that said gradation patterns are aligned in increasing order of concentration from an end to the other end of said pattern chart.

7. The image forming apparatus as defined in claim 1, wherein said image processing section processes the image information read by said image reading section, with reference to a color of a base of said pattern chart, and said image processing section adjusts an image forming condition based on the processed image information.

image forming means for forming an image on a recording member by forming an electrostatic latent image on a light sensitive element based on first image information,

thereon.

17. The image forming apparatus as defined in claim 16, wherein said image processing means reduces a quantity of light emitted to said pattern chart when said image reading means reads said pattern chart, or said image processing means performs image processing on the second image information according to a readout value obtained by reducing a readout gain of said image reading means.

18. An image forming apparatus, comprising:

image forming means for forming an image on a recording member based on first image information,

image reading means for reading the image formed on the recording member as second image information, and

image processing means which processes the second image information and adjusts an image forming condition when the image is a pattern chart having different gradation patterns aligned thereon,

wherein the first image information for forming said pattern chart has multi-step gradation by adding a dither value of a dither matrix, and

said image reading means reads said pattern chart through an image filter which is identical to the dither matrix in size.

when the image is a pattern chart having different gradation patterns aligned thereon,

wherein said image processing means performs image processing to obtain a relationship between an input concentration and the dither value of said image forming means based on 1) a relationship between a) a target readout value of a readout concentration of said image reading means and b) a readout reference value of said image reading means that corresponds to the target readout value, and 2) a relationship between the dither value and an actual readout value obtained by reading said pattern chart by said image reading means.

21. An image processing means comprising the steps of:

a step 'a' of reading a predetermined gradation pattern,

a step 'b' of obtaining a relationship between a) a target readout value used as an input value of image formation and b) a readout reference value which is outputted as a resulting value of the reading and is used as an input value of image formation,

a step 'c' of forming a reading pattern chart composed of a plurality of gradation patterns corresponding to a plurality of dither values,

a step 'd' of obtaining a relationship between an

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actual readout value obtained by reading the reading pattern chart and the corresponding dither value, and

a step 'e' of obtaining a relationship between an input value and a dither value during image formation based on the relationships obtained in the steps 'b' and 'd'.

22. The image processing method as defined in claim 21, further comprising the steps of:

a step 'f' of forming a visual pattern chart based on a relationship between an input value and a dither value, said relationship being obtained in step 'e',

a step 'g' of manually adjusting the relationship by seeing said visual pattern chart, and

a step 'h' of setting another readout reference value based on the relationship adjusted in the step 'g'.

23. The image processing method as defined in claim 21, further comprising a step 'i' of selecting one of a readout reference value of said step 'b' and a readout reference value additionally set in said step 'h'.

24. The image processing method as defined in claim 22, wherein said visual pattern chart is formed with fewer gradation steps than said reading pattern chart.

a sixth step of setting the readout reference value at a value corresponding to the target value obtained by the relationship adjusted in the fifth step.

28. An image processing method comprising the steps of:
forming a first image on a recording member based on
first image information,

forming a second image on the recording member based on information obtained by reading the first image by image reading means, and

adjusting an image processing condition by manual input means which inputs information visually obtained from the second image,

wherein said first image is larger than said second image in number of gradation steps.